

Amendments to the Claims

Please amend the claims as follows (the changes are shown with ~~strikethrough~~ for deleted matter and underlining for added matter). A complete listing of the claims is set out below with proper claim identifiers.

1. (Original) A catheter for accessing human body cavities, comprising:
 - a) a first catheter tube containing first and second lumens separated by a septum and extending from a proximal end to a distal end of said first catheter tube;
 - b) a first bolus connected to said distal end of said first catheter tube, said first bolus having a nose end and a connector end and containing, when connected to said first catheter tube, a first passage and a second passage therein communicating with said first and second lumens, respectively;
 - c) said first passage extending axially through said first bolus to an opening in said nose end of said first bolus, said second passage extending axially through said passage to a port opening radially through a side of said first bolus;
 - d) a second catheter tube containing a lumen extending from a proximal end of the second tube to a distal end of said second tube, said proximal end of said second tube being connected to said first bolus at said opening;
 - e) a second bolus connected to said distal end of said second catheter tube, said second bolus having a nose section and a connector section and containing a passage therein communicating with said lumen in said second catheter tube at said connector section of said second bolus;
 - f) said second bolus having a port therein communicating with said passage in said second bolus.
2. (Original) The catheter of Claim 1 further characterized in that:
 - a) said second bolus has a generally bullet shaped nose on said nose section; and
 - b) said second bolus port is the only port in said second bolus.

3. (Original) The catheter of Claim 1 further characterized in that:
 - a) said second bolus is generally frusto-conical in outside configuration;
 - b) the maximum outside diameter (OD) of said second bolus being substantially larger than the OD of said second catheter tube.
4. (Original) The catheter of Claim 1 further characterized in that:
 - a) said first catheter tube contains a third lumen;
 - b) said third lumen communicating with said port in said first bolus.
5. (Canceled)
6. (Original) The catheter of Claim 1 further characterized in that:
 - a) said second catheter tube has a predetermined outside diameter (OD); and
 - b) said second bolus has a maximum OD adjacent said connector end where it joins said second lumen, said maximum OD being at least 25% larger than said predetermined OD.
7. (Original) The catheter of Claim 1 further characterized in that:
 - a) said port in said first bolus is open on the sides of said first bolus substantially down to the level of said septum said first catheter tube.
8. (Original) The catheter of Claim 6 further characterized in that:
 - a) said second catheter tube is an 8FR size tube.
9. (Original) The catheter of Claim 4 further characterized in that:
 - a) said second and third lumens communicate with said port through said second passage.
10. (Original) The catheter of Claims 9 further characterized in that:
 - a) said third lumen has a smaller cross-sectional area than said second lumen.

11. (Original) The catheter of Claim 1 further characterized in that:
a) said septum in said first catheter tube extends under, and forms at least a portion of the base of said radially opening port in said first bolus.

12. (Original) The catheter of Claim 1 further characterized in that:
a) said first catheter tube and said first bolus are welded together.

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Previously Amended) A catheter for delivering fluid into, or aspirating fluid out of, a body cavity or cavities, comprising:

a) a multiple lumen tube containing at least first and second lumens and having a proximal end and a distal end, said tube containing a septum separating said first and second lumens, said tube being formed so that said first lumen is shorter than said second lumen at said distal end whereby said second lumen opens and said septum terminates at a predetermined distance from where said first lumen opens at said distal end of said multiple lumen tube;

b) a first bolus having a nose end and a connector end, said first bolus having an axial passage therethrough;

c) said distal end of said multiple lumen tube being seated in said axial passage at said connector end of said bolus;

d) a single lumen catheter tube seated in said axial passage of said first bolus at its nose end, said single lumen tube extending from a proximal end to a distal end and a port in said distal end.

18. (Previously Amended) The catheter of Claim 17 further characterized by and including;

a) a second bolus on the distal end of said second catheter tube;

b) said port in said distal end of said second bolus being formed in the side of said second bolus.

19. (Original) The catheter of Claim 18 further characterized in that:

a) said second bolus has a bullet shaped nose.

20. (Canceled)

21. (Canceled)

22. (Previously Presented) A catheter, comprising:

a) a catheter tube formed of resilient plastic, said tube having a distal end and containing a first lumen and a second lumen separated by a septum;

b) said distal end of said tube being formed so that said second lumen and said septum extend beyond said first lumen for a predetermined distance whereby said septum forms a substantially flat outer wall of said tube for said predetermined distance;

c) a bolus molded of resilient plastic and connected to said distal end of said tube, said bolus forming at least a portion of each of a first port extending radially of said catheter and communicating with said first lumen and a second port communicating with said second lumen;

d) said septum, where it forms said outer wall of said tube, underlying at least a portion of said first port.

23. (Previously Presented) The catheter of Claim 22 further characterized in that:

a) said catheter tube including a generally cylindrical wall containing said lumens, a portion of said cylindrical wall adjacent said distal end of said catheter being removed to expose said septum and create said substantially flat outer wall.

24. (Previously Presented) The catheter of Claim 23 further characterized in that:

(a) said second lumen extends to an opening at said distal end of said tube;

(b) said first lumen extends to an opening at a predetermined distance from said distal end of said tube; and

(c) said bolus tip includes an attachment section fastened to said septum where it comprises an outer wall and has a rear face defining a ramp including a surface inclined at an angle to said septum.

25. (Previously Presented) The catheter of Claim 24 further characterized in that:

(a) said ramp extends rearwardly to an intersection with said first lumen opening.

26. (Previously Presented) The catheter of Claim 17 further characterized in that:

(a) said first bolus includes a generally cylindrical plug seated in the distal end of said first catheter tube.

27. (Previously Presented) The catheter of Claim 26 further characterized in that:

(a) said plug has a port formed in a nose section of said plug, said second catheter tube being seated in said plug port.

28. (New) The catheter of Claim 26 further characterized in that:

(a) said cylindrical plug has substantially the same maximum outside diameter as the maximum outside diameter of said multiple lumen tube.

29. (New) The catheter of Claim 28 further characterized in that:

(a) said first bolus is at least partially formed by an overmold portion.

30. (New) A catheter for delivering fluid into and aspirating fluid out of a body cavity or cavities comprising:

(a) a first tube arrangement containing at least first and second lumens extending from a proximal end of said first tube arrangement to a distal end thereof;

(b) a second tube arrangement containing a single lumen extending from a proximal end of said second tube arrangement to a distal end thereof;

(c) a connecting member connecting said distal end of said first tube arrangement with said proximal end of said second tube arrangement where said first lumen in said first tube arrangement is in fluid communication with said lumen in said second tube arrangement;

(d) a first fluid port in the side of said connecting member in fluid communication with said second lumen; and

(e) a second fluid port in the distal end of said second tube arrangement in fluid communication with said single lumen.

31. (New) The catheter of Claim 30 further characterized in that:

(a) said second fluid port is in the side of said second tube arrangement; and

(b) said distal end of said second tube arrangement includes a plug in the corresponding end of said single lumen.